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10/821,927	04/12/2004	Junya Maruyama	07977-0297002	2114
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EXAMINER				
NIESZ, JAMIE C				
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2822				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

### Office Action Summary

**Application No.**

10/821,927

**Applicant(s)**

MARUYAMA ET AL.

**Examiner**

JAMIE NIESZ

**Art Unit**

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 122-124, 126-140 and 171-183 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 122-124, 126-140 and 171-183 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is in response to the Amendment and Request for Continued Examination filed October 25, 2010.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 122-124, 126, 137-140, 171 and 173 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. (U.S. Patent No. 5,239,228) in view of Ehara et al. (U.S. Patent No. 6,601,962).

4. Regarding claim 122, Taniguchi discloses an electronic appliance (thin film electroluminescence device) comprising:

a display panel (Fig. 10), the display panel comprising:

a first substrate (11);

a light emitting element (14, luminescent layer) over the first substrate (11); and

a second substrate (51) over the light emitting element (14), wherein light emitted from the light emitting element (14) is outputted through the second substrate (51; Col. 7, Lines 8-15).

Taniguchi, however, does not disclose wherein minute unevennesses are formed on a bottom surface of the second substrate and wherein the light outputted through the

second substrate passes through the minute unevennesses. Attention is brought to the Ehara reference, which discloses a light emitting device (Fig. 1) wherein minute unevennesses (11a) are formed on the bottom surface of a transparent guide plate (1) and wherein the light outputted through guide plate (1) passes through the minute unevennesses (11a). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display panel disclosed by Taniguchi to include wherein minute unevennesses are formed on a bottom surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses, as taught by Ehara, since the minute unevennesses improve the uniformity of the light intensity distribution from the guide plate (Col. 5, Lines 12-22).

5. Regarding claim 123, Taniguchi discloses wherein the first substrate (11) is a glass substrate (Col. 3, Lines 33 and 34).

6. Regarding claim 124, Taniguchi discloses wherein the first substrate (11) and second substrate (51) are a glass substrate (Col. 3 Lines 33 and 34 and Col. 7, Line 8).

7. Regarding claim 126, Ehara discloses wherein the electronic appliance is one selected from the group consisting of a mobile telephone, a PDA, an electronic book, a video camera, a personal computer, an image reproduction apparatus, a digital camera and a mobile computer (Col. 4, Lines 58-60).

8. Regarding claim 137, Taniguchi discloses a light emitting device (thin film electroluminescence device, Fig. 10) comprising:

a first substrate (11);

a light emitting element (14, luminescent layer) over the first substrate (11); and

a second substrate (51) bonded to the first substrate (11), over the light emitting element (14),

wherein light emitted from the light emitting element (14) is outputted through the second substrate (51; Col. 7, Lines 8-15).

Taniguchi, however, does not disclose wherein minute unevennesses are formed on a bottom surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses. Attention is brought to the Ehara reference, which discloses a light emitting device (Fig. 1) wherein minute unevennesses (11a) are formed on the bottom surface of a transparent guide plate (1) and wherein the light outputted through guide plate (1) passes through the minute unevennesses (11a). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display panel disclosed by Taniguchi to include wherein minute unevennesses are formed on a bottom surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses, as taught by Ehara, since the minute unevennesses improve the uniformity of the light intensity distribution from the guide plate (Col. 5, Lines 12-22).

9. Regarding claim 138, Taniguchi discloses wherein the first substrate (11) is a glass substrate (Col. 3, Lines 33 and 34).

10. Regarding claim 139, Taniguchi discloses wherein the first substrate (11) and second substrate (51) are a glass substrate (Col. 3 Lines 33 and 34 and Col. 7, Line 8).

11. Regarding claim 140, Ehara discloses wherein the electronic appliance is one selected from the group consisting of a mobile telephone, a PDA, an electronic book, a video camera, a personal computer, an image reproduction apparatus, a digital camera and a mobile computer (Col. 4, Lines 58-60).

12. Regarding claims 171 and 173, Taniguchi and Ehara disclose the electronic appliance having minute unevennesses. Taniguchi and Ehara, however, do not disclose wherein heights of the minute unevennesses are set to be 0.1 micron to 3 micron. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the electronic appliance disclosed by Taniguchi and Ehara to include wherein the heights of the minute unevennesses are set within the above limitation, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (1955).

13. Claims 127-136, 172 and 174-183 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. (U.S. Patent No. 5,239,228) in view of Ebisawa et al. (U.S. Patent No. 6,284,342) and in further view of Ehara et al. (U.S. Patent No. 6,601,962).

14. Regarding claim 127, Taniguchi discloses an electronic appliance (thin film electroluminescence device) comprising:

a display panel (Fig. 10), the display panel comprising:  
a first substrate (11);

a light emitting element (14, luminescent layer) over the first substrate (11); and

a second substrate (51) over the light emitting element (14),

wherein a surface of the second substrate (51) comprises a first region (sealing region), a second region (central region over light emitting layer 14) and a third region (53), the first region is bonded to the first substrate (11) with a layer having adhesion (52), the second region (central region) is located inside the first region (sealing region), and the third region (53) is located inside the second region (central region) and concaved relative to the second region,

wherein a dry agent (55) is provided in the third region (53; Col. 7, Lines 38-40), and

wherein light emitted from the light emitting element (14) is outputted through the second substrate (51, Col. 7, Lines 8-15).

Taniguchi, however, does not disclose wherein the second region is concaved relative to the first region. Attention is brought to the Ebisawa reference, which discloses a similar display device (Fig. 1) comprising a first substrate (1) and a second substrate (3) bonded with a layer having adhesion (2). Ebisawa further discloses wherein the surface of the second substrate (3) has a first region (sealing region), a second region (inner recess region) and a third region (desiccant, 6, region) and wherein the second region (inner recess region) is located inside the first region (sealing region) and concaved relative to the first region (sealing region). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display device

disclosed by Taniguchi to include the second region (central region) is concaved relative to the first region (sealing region), as taught by Ebisawa, since a concaved second (central) region can form a cavity above the light emitting element, similar to the cavity taught by Taniguchi Fig. 10, but using a thinner adhesive layer.

15. Regarding claim 128, Ebisawa discloses wherein a permeable film (5, sheet having gas and water vapor permeability) is adhered to a part of the second region (inner recess region) so that the dry agent (6, desiccant) is contained in the third region (see Fig. 1).

16. Regarding claim 129, Ebisawa discloses wherein the permeable film (5) is not in contact with the first substrate (1, see Fig. 1).

17. Regarding claim 130, Ebisawa discloses wherein the second region (inner recess region) is recessed by 160 micron to 350 micron relative to the first region (sealing region); the sealing plate 3 is preferably held above the substrate about 1 to 500 microns, which may be accomplished through a spacer, or providing the sealing plate with a recess, Col. 4, Lines 49-63).

18. Regarding claim 131, Ebisawa discloses wherein the second region (inner recess region) is recessed by 10 micron to 50 micron relative to the first region (sealing region); the sealing plate 3 is preferably held above the substrate about 1 to 500 microns, which may be accomplished through a spacer, or providing the sealing plate with a recess, Col. 4, Lines 49-63).



19. Regarding claim 132, Ebisawa discloses wherein the third region (desiccant region) is recessed by 50 micron to 150 micron relative to the second region (inner recess region; Col. 3, Lines 56-59).

20. Regarding claim 133, Taniguchi discloses wherein the first substrate (11) is a glass substrate (Col. 3, Lines 33 and 34).

21. Regarding claim 134, Taniguchi discloses wherein the first substrate (11) and second substrate (51) are a glass substrate (Col. 3 Lines 33 and 34 and Col. 7, Line 8).

22. Regarding claim 135, Ebisawa discloses wherein a thickness of the layer having adhesion (2) is 10 micron or less (Col. 14, Lines 33-38).

23. Regarding claim 136, Ehara discloses wherein the electronic appliance is one selected from the group consisting of a mobile telephone, a PDA, an electronic book, a video camera, a personal computer, an image reproduction apparatus, a digital camera and a mobile computer (Col. 4, Lines 58-60).

24. Regarding claim 172, Taniguchi and Ehara disclose the electronic appliance having minute unevennesses. Taniguchi and Ehara, however, do not disclose wherein heights of the minute unevennesses are set to be 0.1 micron to 3 micron. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the electronic appliance disclosed by Taniguchi and Ehara to include wherein the heights of the minute unevennesses are set within the above limitation, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (1955).

25. Regarding claim 174, Taniguchi discloses a light emitting device (thin film electroluminescence device) comprising:

a display panel (Fig. 10), the display panel comprising:

a first substrate (11);

a light emitting element (14, luminescent layer) over the first substrate (11); and

a second substrate (51) over the light emitting element (14),

wherein a surface of the second substrate (51) comprises a first region (sealing region), a second region (central region over light emitting layer 14) and a third region (53), the first region is bonded to the first substrate (11) with a layer having adhesion (52), the second region (central region) is located inside the first region (sealing region), and the third region (53) is located inside the second region (central region) and concaved relative to the second region,

wherein a dry agent (55) is provided in the third region (53; Col. 7, Lines 38-40), and

wherein light emitted from the light emitting element (14) is outputted through the second substrate (51, Col. 7, Lines 8-15).

Taniguchi, however, does not disclose wherein the second region is concaved relative to the first region. Attention is brought to the Ebisawa reference, which discloses a similar display device (Fig. 1) comprising a first substrate (1) and a second substrate (3) bonded with a layer having adhesion (2). Ebisawa further discloses wherein the surface of the second substrate (3) has a first region (sealing region), a second region (inner

recess region) and a third region (desiccant, 6, region) and wherein the second region (inner recess region) is located inside the first region (sealing region) and concaved relative to the first region (sealing region). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display device disclosed by Taniguchi to include the second region (central region) is concaved relative to the first region (sealing region), as taught by Ebisawa, since a concaved second (central) region can form a cavity above the light emitting element, similar to the cavity taught by Taniguchi Fig. 10, but using a thinner adhesive layer.

Taniguchi also does not disclose wherein minute unevennesses are formed on a bottom surface of the second substrate in the second region and wherein the light outputted through the second substrate passes through the minute unevennesses. Attention is brought to the Ehara reference, which discloses a light emitting device (Fig. 1) wherein minute unevennesses (11a) are formed on the bottom surface of a transparent guide plate (1) above the light emitting region and wherein the light outputted through guide plate (1) passes through the minute unevennesses (11a). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display panel disclosed by Taniguchi to include wherein minute unevennesses are formed on a bottom surface of the second substrate in the second region and wherein the light outputted through the second substrate passes through the minute unevennesses, as taught by Ehara, since the minute unevennesses improve the uniformity of the light intensity distribution from the guide plate (Col. 5, Lines 12-22).

26. Regarding claim 175, Ebisawa discloses wherein a permeable film (5, sheet having gas and water vapor permeability) is adhered to a part of the second region (inner recess region) so that the dry agent (6, desiccant) is contained in the third region (see Fig. 1).

27. Regarding claim 176, Ebisawa discloses wherein the permeable film (5) is not in contact with the first substrate (1, see Fig. 1).

28. Regarding claim 177, Ebisawa discloses wherein the second region (inner recess region) is recessed by 160 micron to 350 micron relative to the first region (sealing region; the sealing plate 3 is preferably held above the substrate about 1 to 500 microns, which may be accomplished through a spacer, or providing the sealing plate with a recess, Col. 4, Lines 49-63).

29. Regarding claim 178, Ebisawa discloses wherein the second region (inner recess region) is recessed by 10 micron to 50 micron relative to the first region (sealing region; the sealing plate 3 is preferably held above the substrate about 1 to 500 microns, which may be accomplished through a spacer, or providing the sealing plate with a recess, Col. 4, Lines 49-63).

30. Regarding claim 179, Ebisawa discloses wherein the third region (desiccant region) is recessed by 50 micron to 150 micron relative to the second region (inner recess region; Col. 3, Lines 56-59).

31. Regarding claim 180, Taniguchi discloses wherein the first substrate (11) is a glass substrate (Col. 3, Lines 33 and 34).

32. Regarding claim 181, Taniguchi discloses wherein the first substrate (11) and second substrate (51) are a glass substrate (Col. 3 Lines 33 and 34 and Col. 7, Line 8).
33. Regarding claim 182, Ebisawa discloses wherein a thickness of the layer having adhesion (2) is 10 micron or less (Col. 14, Lines 33-38).
34. Regarding claim 183, Ehara discloses wherein the electronic appliance is one selected from the group consisting of a mobile telephone, a PDA, an electronic book, a video camera, a personal computer, an image reproduction apparatus, a digital camera and a mobile computer (Col. 4, Lines 58-60).

***Response to Arguments***

35. Applicant's arguments with respect to claims 122, 127, 137 and 174 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMIE NIESZ whose telephone number is (571)270-7874. The examiner can normally be reached on Monday through Thursday 8-6:30 EST.
37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
38. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2822

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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